

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**In the DO/EO/US**

In re the Application of:

Pascal PERRIAT et al.

Art Unit: not yet assigned

Application No.: 10/591,465

Examiner: not yet assigned

Filed: September 1, 2006

Attorney Dkt. No.: 71247-0065

For: HYBRID NANOPARTICLES WITH  $\text{LN}_2\text{O}_3$  CORE AND CARRYING BIOLOGICAL  
LIGANDS, AND METHOD OF PREPARATION THEREOF (AS AMENDED)

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

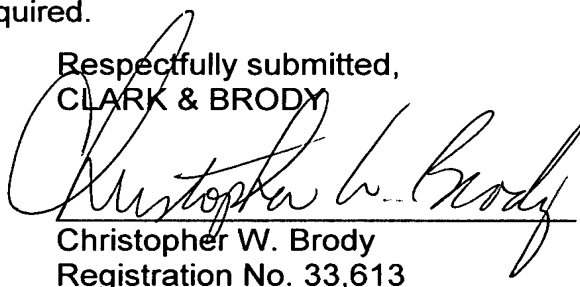
Sir:

In accordance with the provisions of 37 C.F.R. 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached form PTO-1449. It is respectfully requested that the references be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

As permitted by Rule 1.98(a), copies of the U.S. references are not included herewith.

Applicants respectfully submit that this disclosure is being filed in accordance with 37 C.F.R. 1.97(b), therefore, no fee is required.

Respectfully submitted,  
CLARK & BRODY



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Date: June 29, 2007

FORM PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  LIST OF REFERENCES CITED BY APPLICANT  <i>(Use several sheets if necessary)</i>	ATTY. DOCKET NO.	SERIAL NO.
	<b>71247-0065</b>	<b>10/591,465</b>
	APPLICANT <b>Pascal PERRIAT et al.</b>	
	FILING DATE	GROUP ART UNIT
	<b>09/01/2006</b>	<b>Not yet assigned</b>

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	1.	2003/0180780	09/25/2003	FENG et al.			
	2.	6,368,586	04/09/2002	JACOB et al.			

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION		
							YES	NO	PART.
	3.	WO 00/17642	03/30/2000	PCT			x		
	4.	WO 00/29617	05/25/2000	PCT			x		

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.) CONTINUED ON PAGE 2

	5.	C. Louis et al., "Nanosized Hybrid Particles with Double Luminescence for Biological Labeling", Chem. Mater. 2005, 17, 1673-1682
	6.	J. Feng et al., "Functionalized Europium Oxide Nanoparticles Used as a Fluorescent Label in an Immunoassay for Atrazine", Analytical Chemistry, Vol. 75, No. 19, October 1, 2003, pgs. 5282-5286
	7.	R. Bazzi et al., "Synthesis and luminescent properties of sub-5-nm lanthanide oxides nanoparticles", Journal of Luminescence 102-103 (2003) 445-450
	8.	C. Cannas et al., "Synthesis, characterization and optical spectroscopy of a Y <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> nanocomposite doped with Eu <sup>3+</sup> ", Journal of Non-Crystalline Solids 306 (2002) 193-199
	9.	W. Que et al., "Yellow-to-violet upconversion in neodymium oxide nanocrystal/titania/ormosil composite sol-gel thin films derived at low temperature", Journal of Applied Physics, Vol. 90, No. 9, Nov. 1, 2001, pgs. 4865-4867
	10.	W. Que et al., "Fluorescence characteristics from microemulsion technique derived erbium (III) oxide nanocrystals", Materials Research Bulletin 36 (2001) 889-895
	11.	Database Chemlabs Online, Chemical Abstracts Service, Columbus, OH, March 8, 2004, B. Sun et al., "Rare earth nanoparticle for labeling biomaterial, its preparation and application" XP002300295

EXAMINER	DATE CONSIDERED
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. <b>71247-0065</b>	SERIAL NO. <b>10/591,465</b>
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	13.	C. Feldmann, "Preparation of Nanoscale Pigment Particles", Adv. Mater. 2001, 13, No. 17, Sept. 3, 2001, pgs. 1301-1303
	14.	W. Chan et al., "Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection", Science, Vol. 281, Sept. 25, 1998, pgs. 2016-2018
	15.	I. Hemmila, "Lanthanides as probes for time-resolved fluorometric immunoassays", Scand. J. Clin. Lab. Invest., 1988, 48, pgs. 389-400
	16.	R. Bazzi et al., "Synthesis and properties of europium-based phosphors on the nanometer scale: Eu <sub>2</sub> O <sub>3</sub> , Gd <sub>2</sub> O <sub>3</sub> :Eu, and Y <sub>2</sub> O <sub>3</sub> :Eu", Journal of Colloid and Interface Science 273 (2004), 191-197

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